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Septobasidium maesae sp. nov. (*Septobasidiaceae*) from China

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Abstract—A new species, *Septobasidium maesae* on *Maesa perlarius* associated with *Pinnaspis* sp. and *Diaspidiotus* sp. (*Diaspididae*), is described. It was collected from Wuzhi Mountain, Hainan Province, China.

Key words—*Pucciniomycetes*, *Septobasidiales*, taxonomy

An undescribed *Septobasidium* species on *Maesa perlarius* was found in Wuzhi Mountain National Nature Reserve in Hainan Province, tropical China in November 2008. It was associated with two kinds of scale insects, *Pinnaspis* sp. and *Diaspidiotus* sp., belonging to the family *Diaspididae*. This species is similar to *Septobasidium filiforme* Couch ex L.D. Gómez & Henk (Gómez & Henk 2004) but differs in producing thicker basidiomata, only 4-celled basidia, and a single layer including pillar and the hymenium. *Septobasidium filiforme* has 4-celled, 3-celled, or 2-celled basidia and a number of layers including pillars and the hymenia. In addition, the new species has brown coloured basidia and basidiospores, whereas *S. filiforme* has hyaline basidiospores. We describe the new species as:

Septobasidium maesae C.X. Lu & L. Guo, **sp. nov.** Figs. 1–7

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Basidioma resupinatum, perenne, 1.5–26 × 0.8–6 cm diam., cinerascentibrunneum, margine albidum, determinatum, 1–4 mm latum; superficie laeve, maturitate rimosum separabileque, tunc stratum columnarum emergens, in sectione primum 465–525 µm crassum, deinde 1105–1720 µm crassum, e partibus tribus compositum: 1) subiculum 15–

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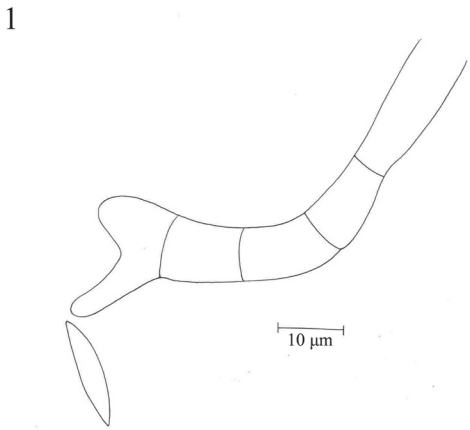

Fig. 1. A basidium and a basidiospore of *Septobasidium maesae* (HMAS 184981, holotype).

27 μm crassum; 2) pars columnae usque ad 1030–1460 μm longa; 3) hymenium 60–235 μm crassum; probasidia obovoidea 10–15 × 6–9 μm, hyalina vel brunneola, persistentia; basidia cyclindrica, curvata, 4-cellularia, 28–55×7.5–11.5 μm, brunnea; sterigmata conica, ca. 12 μm longa; basidiosporae fusiformes, 18–19.5 × 4–5 μm, brunneolae.

Type: On *Maesa perlarius* (Lour.) Merr. (*Myrsinaceae*): China, Hainan, Wuzhi Mountain, alt. 700 m, 28.XI.2008, S.H. He, Y.F. Zhu & L. Guo 2515, HMAS 184981 (**holotype**), associated with *Pinnaspis* sp. and *Diaspidiotus* sp. (*Diaspididae*).

Basidiomata on branches and trunks, resupinate, perennial, 1.5–26 × 0.8–6 cm in diam., greyish-brown; margin white, determinate, 1–4 mm wide; surface smooth, becoming cracked and peeled off after maturity; usually the cracked edges curling back, a layer of brown pillars emerging. In section 465–525 μm thick in young stage, up to 1105–1720 μm thick in old stage, composed of three layers: (1) a subiculum, 15–27 μm thick; (2) a region of pillars with pillars stubby, branched outwards at the top in young stage; hyphae of young pillars 2.5–3 μm thick, becoming slender and tall, up to 1030–1460 μm long and sparingly branched in old stage; hyphae of mature pillars 5–6 μm thick, (3) hymenium 60–235 μm thick in maturity; probasidia obovoid, 10–15 × 6–9 μm, hyaline or brownish; probasidial cell remaining after the formation of the basidia; basidia cylindrical, curved, 4-celled, 28–55 × 7.5–11.5 μm, brown; sterigmate conical, brown, up to 12 μm long; basidiospores fusiform, 18–19.5 × 4–5 μm, brown. Haustoria consisting of irregularly coiled hyphae.

Figs. 2–7 (right). *Septobasidium maesae* (HMAS 184981, holotype). 2. Basidiomata on branches. 3. Section in young stage. 4. Pillars in old stage. 5. Probasidia. 6. Hymenium. 7. Basidium with a persisting probasidium, sterigma, and basidiospore.

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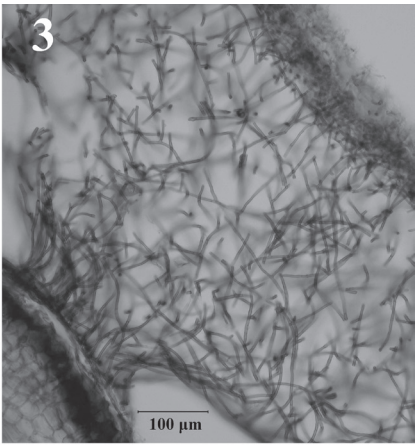
3
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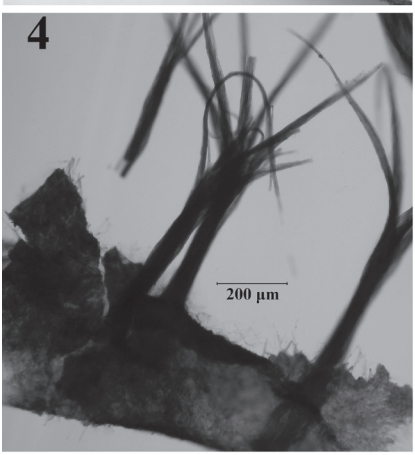
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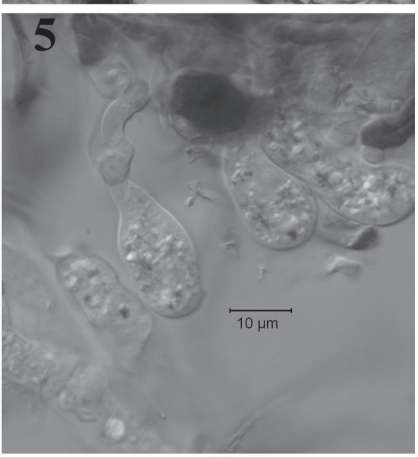
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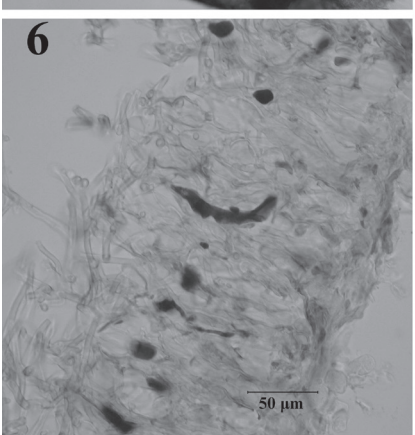
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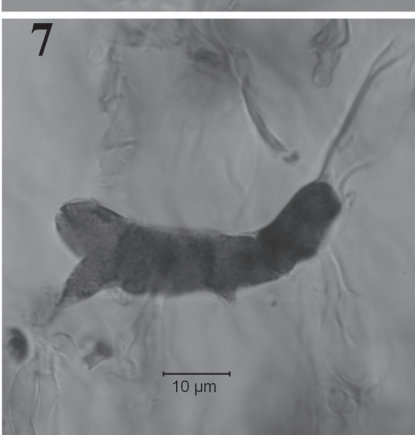
50 µm


7
10 µm

To date, 15 species of *Septobasidium* are reported in China (Sawada 1931, 1933, Couch 1938, Teng 1963, Tai 1979, Kirschner & Chen 2007). They are *Septobasidium acaciae* Sawada, *S. albidum* Pat., *S. bogoriense* Pat., *S. carbonaceum* Pat., *S. carestianum* Bres., *S. citricola* Sawada, *S. formosense* Couch ex L.D. Gómez & Henk, *S. humile* Racib., *S. leucostemum* Pat., *S. parlatoriae* Sawada, *S. petchii* Couch. ex L. D. Gómez & Henk, *S. reinkingii* Couch ex L.D. Gómez & Henk, *S. sinense* Couch ex L.D. Gómez & Henk, *S. tanakae* (Miyabe) Boedijn & B.A. Steinm., and the new species in this paper. In China there are undoubtedly many species of *Septobasidium* yet to be discovered. Extensive collecting of the genus is required for this vast country, especially in tropical and subtropical regions.

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Literature cited

Couch JN. 1938. The Genus *Septobasidium*. Univ. of North Carolina Press, Chapel Hill. 480 p.

Gómez LD, Henk DA. 2004. Validation of the species of *Septobasidium* (*Basidiomycetes*) described by John N. Couch. Lankesteriana 4: 75–96.

Kirschner R, Chen CJ. 2007. New reports of two hypophyllous *Septobasidium* species from Taiwan. Fung Sci 22(1,2): 39–46.

Sawada K. 1931. Descriptive catalogue of the Formosan fungi. Part V. Rep. Dept. Agric. Govt. Res. Inst. Formosa. 51: 1–131.

Sawada K. 1933. Descriptive catalogue of the Formosan fungi. Part VI. Rep. Dept. Agric. Govt. Res. Inst. Formosa. 61: 1–99.

Tai FL. 1979. Sylloge Fungorum Sinicorum. Science Press, Beijing. 1527 p.

Teng SC. 1963. Fungi of China. Science Press, Beijing. 808 p.